Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently amended) A method for measuring tissue edema, characterised by

an electromagnetic probe ~~(24)~~ is placed on the skin during the measurement, and the capacitance of the probe is proportional to the dielectric constant of the skin and the subcutaneous fat tissue, which is further proportional to the water content of the skin, ~~arid~~ and, that

the edema is scored by measuring the capacitance of the electromagnetic probe, so called open-ended coaxial cable, at a high frequency, approximately 20-500 MHz.

2. (Original) A method according to claim 1, characterized in that the measurement is made manually and take only a few seconds.

3. (Original) A method according to claim 1, characterized in that for the measurement the probe is secured on the skin by an attachment, such as strap-like attachment, for a long time, for instance hours or days, in which case the edema can be monitored continuously.

4. (Currently amended) A method according to ~~any of the~~ claim 1, characterised in that the device operates only on a single precisely set frequency.

5. (Currently amended) A method according to ~~any of the~~ claim 1, characterised in that edema of the uppermost layers of the skin is measured using a frequency of approximately 20-50 MHz, in which case the electric field is concentrated in the uppermost layers of the skin.

6. (Currently amended) A method according to ~~any of the~~ claim 1, characterised in that the edema of deep skin layers and the underlying subcutaneous fat is measured using a frequency of approximately 50-500 MHz, in which case the electric field penetrates deeply into the skin and the underlying subcutaneous fat.

7. (Currently amended) A device for measuring tissue edema, which device includes

an electromagnetic probe ~~(24)~~ in order to be placed on the skin during the measurement~~;~~, ~~whereat~~ wherein the capacitance of the probe is proportional to the dielectric constant of the skin and the subcutaneous fat tissue, which is further proportional to the water content of the skin, characterised in that the device includes

a high frequency unit ~~(20-23, 25-27)~~ for measuring the capacitance of the electromagnetic probe at a high frequency, approximately 20-500 MHz,

a unit ~~(29)~~ for calculating measured values and the

tissue edema, and that

the distance between two electrodes of the probe ~~(24)~~ being large enough in order for the electric field to penetrate up to the subcutaneous fat tissue, and the said distance is 2-10 mm.

8. (Previously presented) A device according to the claim 7, characterised in that the device is arranged to measure only on a single precisely set frequency.

9. (Currently amended) A device according to the claim 7, characterised in that high frequency unit ~~(20-23, 25-27)~~ is arranged to measure the capacitance of the electromagnetic probe at the range approximately *20-50* MHz.

10. (Currently amended) A device according to the claim 7, characterised in that high frequency unit ~~(20-23, 25-27)~~ is arranged to measure the capacitance of the electromagnetic probe at the range approximately 50-500 MHz.

11. (New) A method for measuring tissue edema comprising:

placing a coaxial electrode on the skin;

generating a first signal from an oscillator, wherein the frequency of the first signal is about 20 to about 500 MHz;

transmitting a first portion of the first signal to the probe and through the skin and subcutaneous fat tissue;

receiving a reflected signal from the skin and subcutaneous fat tissue through the probe;

leading the reflected signal to a first input of a phase detector;

transmitting a second portion of the first signal to a second input of the phase detector;

operating the phase detector in a saturated state, wherein signal amplitudes from the reflected signal and the second portion of the first signal form the saturated state;

measuring a phase difference between the reflected signal and the second portion of the signal;

calculating a dielectric constant from the phase difference; and

calculating a water content of the skin based on the dielectric constant.